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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,162	07/25/2003	Stephan Kirchmeyer	CH-7855/STA-211	2513

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EXAMINER

RONESI, VICKEY M

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/627,162	Applicant(s) KIRCHMEYER ET AL.	
	Examiner Vickey Ronesi	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08).
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/3/2005 has been entered.

Claim Objections

2. Claims 1 and 3 are objected to because of the following informality: formula (1) is described with the name 3,4-dialkoxythiophene, however, formula (1) represents both 3,4-dialkoxythiophenes and 3,4-alkylenedioxythiophenes. Applicant is required to either eliminate the term "3,4-dialkoxythiophene," provide a truly representative term, or modify formula (1) to represent only 3,4-dialkoxythiophenes.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 1 is drawn to a method of producing a dispersion containing a complex of poly(3,4-ethylenedioxythiophene), however, formula (1) provides for thiophene polymers other than poly(3,4-ethylenedioxythiophene) (i.e., poly(3,4-dialkoxythiophene)). It is therefore unclear what the claim is intended to encompass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonas et al (US 5,300,575 cited on IDS dated 01/26/2004) in view of Moehwald (US 4,728,399).

Jonas et al discloses a polymerization of 3,4-dialkoxythiophenes wherein 3,4-dialkoxythiophene (col. 2, lines 12-44), a polyacid (i.e., polyanion) (col. 2, lines 45-52), an oxidizing agent (col. 3, lines 11-15; col. 3, line 47 to col. 4, line 21), and strong inorganic acids (in cases where the polyacid is weakly acidic which intrinsically lowers the pH of the reaction mixture) (col. 4, lines 22-26) are dispersed in water (col. 3, lines 19-25). After polymerization, the composition is used to coat plastic moldings and a coating is obtained when the water is evaporated (col. 3, lines 39-47).

Jonas et al does not disclose the use the presently claimed peroxodisulfuric acid as an oxidizing agent in its composition; however, it does disclose that oxidizing agents that are

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typically used in oxidative polymerization of pyrrole are used in polymerizing dialkoxythiophene (col. 3, lines 12-13).

Moehwald discloses an electrically conductive polymer that is formed by treating polymer-forming monomers such as pyrroles and thiophenes with an oxidizing agent (col. 2, lines 11-13). Oxidizing agents which have proven to be useful are peroxyacids such as peroxodisulfuric acid (col. 3, lines 3-5).

Since Moehwald discloses that peroxodisulfuric acid is a particularly useful oxidizing agent in pyrrole polymerizations and given that Jonas et al is open to any oxidizing agent that is used in the oxidative polymerization of pyrrole, it would have been obvious to one of ordinary skill in the art to use peroxodisulfuric acid as an oxidizing agent in Jonas et al and thereby arrive at the presently cited claims.

Response to Arguments

5. Applicant's arguments filed 10/3/2005 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the method of Jonas et al is limited to 3,4-ethylenedioxythiophene monomers; (B) that Jonas et al does not disclose forming a polythiophene polymer *in situ* on a metal substrate like Moehwald and therefore cannot be combined with Moehwald; (C) that unexpected results with respect to light transmission and surface resistivity are obtained by the use of peroxodisulfuric acid; and (D) that prohibited hindsight has been utilized by the examiner in setting forth the rejection.

With respect to argument (A), Jonas et al clearly discloses both 3,4-dialkoxythiophenes and 3,4-ethylenedioxythiophenes in col. 2, lines 13-44.

With respect to argument (B), note that while Jonas et al and Moehwald utilize different polymerization processes, each one discloses the polymerization of thiophenes in the presence of an oxidizing agent. The outstanding 103 rejection does not combine the inventions of Jonas et al and Moehwald, rather, the rejection only relies on Moehwald's teaching regarding common oxidizing agents such as peroxodisulfuric acid in thiophene and pyrrole polymerizations.

With respect to argument (C), applicant's assertion of unexpected results has been considered, however, there is insufficient evidence to support such a claim. First, proper side-by-side examples have not been provided which can clearly establish unexpected results. In particular, Example 13 and Comparative Example 3 are not proper side-by-side examples since there is less peroxodisulfuric acid oxidizing agent in Example 13 than the sodium peroxodisulfate oxidizing agent in Comparative Example 3. Second, the inventive data and comparative data are not commensurate in scope with the instant claims. Case law holds that evidence is insufficient to rebut a *prima facie* case if not commensurate in scope with the claimed invention. *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983).

With respect to argument (D), given that Jonas et al teaches that its polymerization of thiophene is open to the use of any oxidizing agents that is suitable for oxidative polymerization of pyrroles and given that Moehwald teaches that such oxidizing agents include peroxyacids such as peroxodisulfuric acid which are particularly useful and further teaches that such oxidizing agents are also suitable for polymerizing thiophenes, it would have been obvious to one of ordinary skill in the art to utilize peroxodisulfuric acid as the oxidizing agent in Jonas et al. In light of the above, it is clear that the combination of Jonas et al and Moehwald is not based on hindsight but based on the disclosures and teachings of the prior art.

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Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/12/2005

vr




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